

INTERNATIONAL SEARCH REPORT

10/524 297

Internal Application No
PCT/GB 03/03705

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A63B69/36

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A63B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	US 4 170 356 A (BANKS) 9 October 1979 (1979-10-09) the whole document ---	1-10, 12-15 16
X A	US 3 918 721 A (TRASK, JR.) 11 November 1975 (1975-11-11) the whole document ---	1-3,5,6, 10,13-16 8
X A	US 5 904 624 A (MARTINEZ) 18 May 1999 (1999-05-18) the whole document ---	1,3,6,8, 10,11, 13-16 5
A	US 4 145 054 A (STEWART) 20 March 1979 (1979-03-20) cited in the application column 2, line 9 - line 63; figures 1-10 ---	1-5,10, 12
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- *O* document referring to an oral disclosure, use, exhibition or other means
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- *8* document member of the same patent family

Date of the actual completion of the international search

23 December 2003

Date of mailing of the international search report

07/01/2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 846 143 A (BROCK ET AL.) 8 December 1998 (1998-12-08) column 7, line 50 - line 67; figure 10 ---	1-5, 8, 10, 13-16
A	FR 2 752 167 A (GIRAUD) 13 February 1998 (1998-02-13) the whole document ---	1-3, 8-10
A	US 4 023 812 A (LORANG) 17 May 1977 (1977-05-17) column 4, line 4 - line 43; figures 1-4 -----	3, 12-14

INTERNATIONAL SEARCH REPORT

Information on patent family members

Internatio pplication No
PCT/GB 03/03705

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4170356	A	09-10-1979	NONE	
US 3918721	A	11-11-1975	JP 50095041 A	29-07-1975
US 5904624	A	18-05-1999	NONE	
US 4145054	A	20-03-1979	NONE	
US 5846143	A	08-12-1998	AU 691718 B2	21-05-1998
			AU 4474996 A	21-08-1996
			WO 9623552 A1	08-08-1996
			GB 2311228 A ,B	24-09-1997
			JP 11504531 T	27-04-1999
			US 6251025 B1	26-06-2001
FR 2752167	A	13-02-1998	FR 2752167 A1	13-02-1998
US 4023812	A	17-05-1977	NONE	